

PTO-1449 (Modified)  U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE  INFORMATION DISCLOSURE STATEMENT BY APPLICANT		ATTY. DOCKET NO. 00295.77957	SERIAL NUMBER 69/210,747
		APPLICANT Briggs and Tatum	
		FILING DATE 12/15/98	GROUP ART UNIT 1641

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09/210747  
12/15/98

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EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE
VB	4,293,545	10/06/81	Kucera			
	4,335,106	06/15/82	Kucera			
	4,346,074	08/24/82	Gilmour et al.			
	4,388,299	06/14/83	Kucera			
	4,506,017	03/19/85	Kucera			
	4,559,306	12/17/85	Kucera			
	4,626,430	12/02/86	Kucera			
	4,735,801	04/05/88	Stocker et al.			
	4,837,151	06/06/89	Stocker et al.			
	4,888,170	12/19/89	Curtiss			
	4,957,739	09/18/90	Berget et al.			
	4,999,191	03/12/91	Glisson et al.			
	5,055,400	10/08/91	Lo et al.			
	5,077,044	12/31/91	Stocker et al.			
	5,165,924	11/24/92	Shewen et al.			
✓	5,210,035	05/11/93	Stocker			

## FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATION YES/NO

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

VB	Lindberg et al., Dev. Biol. Stand., 1995, Vol. 84, p 211-9

EXAMINER <i>John Portner</i>	DATE CONSIDERED 2/98
EXAMINER: Initial citation if reference was considered. Draw line through citation if not in conformance to MPEP 609 and not considered. Include copy of this form with next communication to applicant.	

PTO-1449 (Modified)  U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE  INFORMATION DISCLOSURE STATEMENT BY APPLICANT	ATTY. DOCKET NO. 00295.77957	SERIAL NUMBER 09/280747
	APPLICANT Briggs and Tatum	
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EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE
BD	5,468,485	11/21/95	Curtiss, III			
↓	5,389,368	2/14/95	Curtiss, III			

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EXAMINER INITIAL	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATION YES/NO

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BD	Chang et al., "Pneumonic pasteurellosis: Examination of typable and untypable <i>Pasteurella haemolytica</i> strains for Leukotoxin Production, Plasma Content, and Antimicrobial Susceptibility," <i>Am. J. Vet. Res.</i> , 48(3):378-384 (1987)
	Homchampa et al., "Molecular Analysis of the <i>aroA</i> Gene of <i>Pasteurella Multocida</i> and Vaccine Potential of a Constructed <i>aroA</i> Mutant," <i>Molecular Microbiology</i> , 6(23):3585-3593 (1992)
	Briggs et al., "Isolation of a Cryptic Plasmid from <i>Pasteurella haemolytica</i> by Electroporation," Abstract, 72nd Annual Meeting of the Conference of Research Workers in Animal Disease, 11/11/91
	Livrelli et al., "Sequence and Molecular Characterization of the ROB-1 $\beta$ -Lactamase Gene from <i>Pasteurella Haemolytica</i> ," <i>Antimicrobial Agents and Chemotherapy</i> , 35(2):242-251 (1991)
	Rickets et al., "Leukotoxin and Pathogenicity of <i>Pasteurella Haemolytica</i> : Studies with a Leukotoxin Non-Producing Mutant," Abstract, 3rd International Veterinary Symposium, PS 7.19, p. 92 (1993)
	Frey, "Construction of a Broad Host Range Shuttle Vector for Gene Cloning and Expression in <i>Actinobacillus pleuropneumoniae</i> and Other <i>Pasteurellaceae</i> ," <i>Res. Microbiol.</i> 143:263-269 (1992)
	Craig et al., "A Plasmid Which Can Be Transferred Between <i>Escherichia coli</i> and <i>Pasteurella haemolytica</i> by Electroporation and Conjugation," <i>J. Gen. Microbiology</i> , 135:2885-2890 (1989)
	Boyce et al., "Plasmid Profile Analysis of Bovine Isolates of <i>Pasteurella haemolytica</i> ," <i>Am. J. Vet. Res.</i> , 47(6):1204-1206 (1986)
	Schwarz, et al., "Detection and Interspecies-Transformation of a $\beta$ -Lactamase-Encoding Plasmid from <i>Pasteurella haemolytica</i> ," <i>Zbl. Bakt. Hyg. A</i> , 270:462-469 (1989)
	Haghour et al., "Plasmids and Resistance to 9 Chemotherapeutic Agents of <i>Pasteurella multocida</i> and <i>Pasteurella haemolytica</i> ," <i>J. Vet. Med. B</i> 34:509-518 (1987)
	Azad et al., "Distinct Plasmid Profiles of <i>Pasteurella haemolytica</i> Serotypes and the Characterization and Amplification of <i>Escherichia coli</i> of Ampicillin-Resistance Plasmids Encoding ROB-1- $\beta$ -lactamase," <i>J. Gen. Microbiology</i> , 138:1185-1196 (1992)

EXAMINER <i>BD</i>	DATE CONSIDERED 2/88
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PTO-1449 (Modified)	ATTY. DOCKET NO. 00295.77957	SERIAL NUMBER 09/210, 747
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BP	5,424,065	6/13/95	Curtiss, III			
✓	5,210,035	5/11/93	Stocker			

## FOREIGN PATENT DOCUMENTS

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BP	Hoiseth et al., "Aromatic-dependent <i>Salmonella typhimurium</i> are Non-Virulent and Effective as Live Vaccines," <i>Nature</i> , 291:238-239 (1981)
	Smith et al., "Vaccination of Calves Against <i>Salmonella dublin</i> With Aromatic-Dependent <i>Salmonella typhimurium</i> ," <i>Am. J. Vet. Res.</i> , 45(9):1858 (1984)
	Roberts et al., "Construction and Characterization in vivo of <i>Bordetella pertussis aroA</i> Mutants," <i>Infection and Immunity</i> , 58(3):732-738 (1990)
	Ivins et al., "Immunization against Anthrax With Aromatic Compound-Dependent (Aro) Mutants of <i>Bacillus anthracis</i> and with Recombinant Strains of <i>Bacillus subtilis</i> That Produce Anthrax Protective Antigen," <i>Infection and Immunity</i> , 58(2):303-308 (1990)
	Robertsson et al., "Salmonella typhimurium Infection in Calves: Protection and Survival of Virulent Challenge Bacteria After Immunization with Live or Inactivated Vaccines," <i>Infection and Immunity</i> 41(2):742-750 (1983)
	O'Gara et al., "Cloning and Characterization of the <i>serC</i> and <i>aroA</i> Genes of <i>Yersinia enterocolitica</i> , and Construction of an <i>aroA</i> mutant," <i>Gene</i> 84:23-30 (1989)
	Chang et al., "Characterization of Plasmids With Antimicrobial Resistant Genes in <i>Pasteurella haemolytica</i> A1," <i>J. DNA Sequencing and Mapping</i> , 389-97 (1992)
	Rossmannith et al., "Characterization and Comparison of Antimicrobial Susceptibilities and Outer Membrane Protein and Plasmid DNA profiles of <i>Pasteurella haemolytica</i> and Certain Other Members of the Genus <i>Pasteurella</i> ," <i>Am. J. Vet. Res.</i> , 52(12):2016-2022 (1991)

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<i>BP</i>	2/28
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## U.S. PATENT DOCUMENTS

#### FOREIGN PATENT DOCUMENTS

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EXAMINER INITIAL	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATION YES/NO

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

*[Signature]* Tatum et al., "Isolation, Identification, and Cloning of a Non-Palindromic Type II DNA Restriction Endonuclease *Pha I*, From *Pasteurella haemolytica*", Abstract of presentation at American Society for Microbiology, Annual Meeting, May 1993

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**U.S. PATENT DOCUMENTS**

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61	Yang et al., J. Bact., 160(1): 15-21 (1984)
	Matsushima et al., J Bact., 169(5):2298-2300 (1987)
	Marmelstein et al., Appl. Environ. Micro., (59/4): 1077-1081 (1993)
	Wilson, Gene 74: 281 - 289 (1988)
✓	Marra et al., J. Bact., 171/4:2238 - 2240 (1989)

EXAMINER	DATE CONSIDERED
<i>Jo Bots</i>	<i>2/88</i>

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U.S. PATENT DOCUMENTS

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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

BB	<p>Briggs et al., "Characterization of a Restriction Endonuclease, <i>PhaI</i>, from <i>Pasteurella haemolytica</i> Serotype A1 and Protection of Heterologous DNA by a Cloned <i>PhaI</i> Methyltransferase Gene", <i>Applied and Environmental Microbiology</i> 60(6):2006-2010 (1994)</p>
✓	<p>Tatum et al., "Molecular Gene Cloning and Nucleotide Sequencing and Construction of an <i>aroA</i> Mutant of <i>Pasteurella haemolytica</i> Serotype A1", <i>Applied and Environmental Microbiology</i> 60(6):2011-2016 (1994)</p>
✓	

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✓	Old, et al., "Principles of Gene Manipulation", Blackwell Scientific Publications, Oxford, 1989
✓	Lunnen et al., "Cloning Type-II Restriction and Modification Genes", <i>Gene</i> 74:25-32 (1988)
✓	Homchampa et al., "Construction and Vaccine Potential of an AroA Mutant of <i>Pasteurella haemolytica</i> ", <i>Veterinary Microbiology</i> 42:35-44 (1994)
✓	International Search Report for PCT/US94/14095 dated May 2, 1995

EXAMINER <i>S. Porte</i>	DATE CONSIDERED 2/98
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